Site Characterization Form for August 2014 Listing Panel

Date: 7/16/14
Region: 8
Site Name: Anaconda Aluminum Co Col Fls Red Plt
SSID (4-digit): A882
Location: Columbia Falls, Flathead County, Montana
Site Type: Primary Aluminum Smelter
U.S. Congressional District (number): 1 **Representative (name):** Steve Daines

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1. Please identify if any of the following apply? (Simply check boxes – no text needed)

[] Possible EJ concerns
[] Bankrupt PRP(s)
[] Former RCRA facility
[] Site on or impacting Tribal lands
[] Failed SAA
[] Failed OCA
[] Ground water plume with no identified source
[X] Impacting fishery
[] Anticipated Fund-lead
[] Potential state concurrence issues

2. a. What is the site background? (Current use of the property, historical use of the property, if it is related to the cause of contamination?)

The Anaconda Copper Mining Company built the Anaconda Aluminum Reduction Facility and began aluminum production in 1955. The Atlantic Richfield Company (ARCO) purchased the plant in 1978 and operated it until 1985 when it was sold to the Montana Aluminum Investor's Corporation and began operations under CFAC. In 1999, Glencore acquired the company and operated until 2009 when production was curtailed due to poor economic conditions for aluminum production.

The plant is a Vertical Stud Soderberg aluminum reduction facility that uses the Hall Heroult process of producing aluminum in carbon–lined "pots" heated to 960 degrees Celsius (°C). Aluminum oxide is dissolved in a molten cryolite bath and aluminum oxide is reduced to aluminum metal by electrons from direct current through the pot. The molten aluminum is then tapped from the pot and cast into ingots. There are currently 451 pots in place; however the facility has not operated since October 31, 2009.

Aluminum smelting operations are not currently active on-site; however, the plant features consist of numerous buildings and industrial operating facilities such as offices, warehouses, mechanical shops, laboratory, washhouse, paste plant, coal tar pitch tanks, pump houses, and the main pot line facility. Features on the Site include percolation ponds, leachate ponds, sludge ponds, sewage treatment ponds, cathode soaking pits, closed and operational landfills.

b. What is the approximate size of the area of contamination?

There are three sources on site that were investigated. The landfill area is approximately 46 acres. The two percolation ponds are approximately 15 acres total. A polygon created by the known contaminated wells results in an area approximately 145 acres. One of the contaminated domestic wells is located approximately 1.5 miles downgradient of the landfill source areas. The boundaries of the potential plume are unknown at this time.

3. Explain why the site needs remedial action and why it needs to be on the NPL. Also, please describe any human health or ecological risks posed by the site.

This site is eligible for the NPL due to contaminants migrating in the groundwater and surface water pathways. Total Cyanide, in particular, was detected in concentrations above the MCL in groundwater at the site; however, it should be noted groundwater at the site is not consumed. Total Cyanide was detected in two nearby residential wells below the MCL. The residential wells with cyanide detections are located in a neighborhood downgradient of the facility. Many homes in the neighborhood have domestic wells for their water source. Contaminants were also found to have migrated to Cedar Creek and Flathead River, a known fishery. It is unknown if these contaminants are bio-accumulating.

4. What past, current or planned removals or other interim response measures have been/will be taken to prevent contact with contaminants? Who is the lead for the response action: EPA, the State, or PRP?

Since the site reassessment, EPA has conducted a Removal Assessment to determine if cyanide (or other contaminants) are impacting other residential wells in the neighborhood downgradient of the facility. The sampling results were all non-detect. It should be noted that the sampling for the Site Reassessment was in September-October 2013 and the Removal Assessment was conducted in April 2014. These sampling events potentially had dissimilar hydrologic settings, with one sampling event during the low-flow season, and another in the high-flow season.

5. What is the status of the facility? [Active / Inactive]

The facility is inactive although maintaining its permits. There are active NPDES and Air permits for the facility approved by Montana Department of Environmental Quality. The facility is considered a RCRA Large Quantity Generator.

If *ACTIVE*, provide explanation as to why site cannot be addressed under its current regulated program

There are waste sources on site that are not regulated through the active permits as the waste was landfilled prior to being characterized as RCRA listed waste. Specifically, spent potliner was landfilled on site until 1985, prior to it being characterized a RCRA listed waste in 1990.

6. Are there any other NPL sites located nearby (i.e., located within 5 miles)? [Yes / No]
If *YES*, provide site name(s):

No.

7. What types of **sources** (along with descriptions) are at the site? (X all that apply.)

[X] Landfill:
[] Waste Pile:
[X] Surface impoundment:
[] Tanks:
[] Drums:
[] Contaminated soil:
[X] Contaminated ground water plume:
[] Other:

8. What are the contaminants of concern and associated contamination levels? How do these compare to benchmarks (MCLs, ARARs, soil screening levels, etc.)? *Note -- Do not cite SCDM as a benchmark*

Contaminant	**Pathway**	**Highest detected level**	**Type of benchmark**	**Benchmark level**	**Optional:** **# wells or residences affected**
Cyanide	Groundwater	1040 ug/L	MCL	200 ug/L	2 domestic wells have Level 2 detections (111 ug/L)
			EPA Tapwater RSL	1.4 ug/L	
Cyanide	Surface Water – Cedar Creek	43.4 ug/L	Acute CMC	22 ug/L	Cedar Creek not yet established as fishery
			Chronic CCC	5.2 ug/L	
Cyanide	Surface Water – Flathead River Sediment	1.8 mg/kg	--	--	Level 2 detection in a fishery
Fluoride	Groundwater	190,000 ug/L	Montana State Standard	4,000 ug/L	

Contaminant	**Pathway**	**Highest detected level**	**Type of benchmark**	**Benchmark level**	**Optional:** # wells or residences affected
Arsenic	Groundwater	344 ug/L	MCL	10 ug/L	
			Cancer Risk Screening Concentration	0.057 ug/L	
Lead	Groundwater	59.3 ug/L	MCL	15 ug/L	
Manganese	Surface Water	31.4 ug/L	--	--	Level 2 detection in Flathead River, a fishery

9. What are the **pathway(s) scored** in the HRS package?
[X] Ground water pathway
[X] Surface water pathway
[] Soil exposure pathway
[] Air pathway

What are **other pathways of concern** (but not scored)?

[] Ground water pathway
[] Surface water pathway
[X] Soil exposure pathway
[] Air pathway

10. Are there any fish advisories? If yes, please describe.

Not at this time

11. Are there any vapor intrusion concerns at the site?

Not at this time

If yes,
a. Do you have documented evidence of vapor intrusion?
b. Or is the concern based on site characteristics (e.g., TCE ground water plume under residential properties) that increase the likelihood for vapor intrusion?

12. Was the facility permitted under any other EPA authority (RCRA, water, etc.)? If yes, is there any financial assurance?

Yes, the site has had previous permits including NPDES and Air. The facility has been designated a RCRA Large Quantity Generator. The region is not aware of any financial assurance at this time.

13. Please explain any other clean-up approaches that have taken place at the site (e.g., State cleanup, removal, RCRA, Brownfields, enforcement, Superfund Alternative Approach (SAA), willing/viable PRP, other regulatory programs) and how they impact the decision to move forward with the placement of the site on the NPL.

The State of Montana is currently devising a strategy in which, if agreed upon, either the current property owner or another liable party with access will agree to complete additional investigation and cleanup, if necessary, under an Administrative Order on Consent. EPA Region 8 is supporting this approach. If the site owner or other liable party do not agree to complete additional investigation at this point, EPA will proceed with proposing the site to the NPL.

14. Are any **Federal** Agencies involved (even minimally)? [Yes / No]

Not at this time

If *YES*, please list and explain. Also describe what type of contact/discussions EPA has had with the Federal Agencies involved?

15. a. Does the local community support or oppose listing? Have they raised any concerns?

At a public meeting hosted by EPA, the community, by and large, supported further investigation at this site. EPA is aware of one NPL support letter from the Flathead Basin Commission, written to Governor Bullock of Montana.

The site is outside of Columbia Falls city limits in Flathead County. The County Commissioners have not expressed an opinion on the site at this time. Additional engagement will likely be necessary in order to gain formal support for NPL.

b. What community involvement activities have taken place (please list specific details)?

EPA held a public meeting in April 2014 to discuss the site reassessment results. MDEQ was in attendance and discussed options available for investigation using State authority. EPA has met with various stakeholders including city and county officials, County Health Department, current property owner, Montana congressional delegation's staff, and Flathead Basin Commission.

c. What community involvement activities are planned? Please describe.

EPA is planning to hold or attend a public meeting in the fall to update public on ongoing state efforts. EPA will continue to work with County Health Department to gain support for additional investigation.

16. Environmental justice characteristics of the local community:

a. Using page 2 of the EJSCREEN standard report, list the following six demographic indicators of the local community compared to state, region and nation and highlight any at or above the 80th percentile:

Report for: Block Group 300290002011		**Approximate population: 1417**		
Demographic Variables	**Raw Data (%)**	**State Percentile**	**EPA Region Percentile**	**USA Percentile**
Low income	17	18	22	17
Minority	8	56	27	22
Linguistic isolation	0	81	56	46
Less than high school education	5	29	35	22
Age <5	5	39	28	34
Age >65	8	20	41	31

b. Using page 1 of the EJSCREEN standard report, list the primary EJ indexes for each of the following twelve environmental factors at or above the 80th percentile in the state, region and nation:

Primary EJ Indexes	**State Percentile**	**EPA Region Percentile**	**USA Percentile**
Air toxics cancer risk	6	21	25
Air toxics respiratory hazard index	12	35	37
Air toxics neurological hazard index	24	39	35
Diesel particulate matter	32	57	51
Fine particulate matter	15	30	33
Ozone	25	37	26
Lead paint indicator	41	28	31
Traffic proximity and volume	55	60	48
Proximity to RMP facilities	6	11	10
Proximity to TSDFs	32	65	57
Proximity to Superfund sites	58	52	50
Proximity to NPDES facilities	42	47	37

c. What observational data or local knowledge from regional staff or local government gives insight to EJ concerns at the site? (e.g., subsistence fishing or hunting; community has pockets of high poverty/minority that may be too small for EJSCREEN, etc.)

None

17. What other **stakeholders** (local government/PRPs/Tribes/State) are involved at the site? For each stakeholder, please specify whether they support NPL listing and briefly describe their issues/concerns.

PRPs – Glencore and CFAC (current site owner) have been involved with meetings with EPA and DEQ. Glencore has expressed their intent to support CFAC in this process. Glencore is willing to work with DEQ to develop investigation strategies at the site.

Other PRPs have not been involved in conversations regarding the site at this time.

Congressionals – Senator Tester, Senator Walsh, and Represenative Daines' staff have been briefed and are in support of additional investigation

State – DEQ would support EPA taking the lead at this site if an agreement between DEQ and either the current or past property owner is not completed.

18. Do you believe that the Governor will support listing? [Yes / No / Don't Know] Please explain if answer is "No" or "Don't Know".

At this point, EPA Region 8 does not know if the Governor will support listing. Currently Montana DEQ is working towards an agreement with the current property owner; if the agreement were to not be completed, DEQ would likely support NPL designation. It remains to be seen if Flathead County officials will formally support NPL designation.

19. a. Do you expect to receive negative comments on the proposal to list?

Yes, Region 8 expects to receive negative comments on the proposal to list.

b. If not, would this site be a candidate for a streamlined documentation record?

20. Do you have liable PRPs? [Yes / No]

Yes

21. If you have liable PRPs, please answer the following:

a. Name of PRPs

Atlantic Richfield (ARCO), Columbia Falls Aluminum Company (CFAC), Glencore, LLC.

b. Are the PRPs viable and do they have the financial ability to pay for remedial action now – not later in cost recovery? [Yes / No]

ARCO is believed to be viable. Glencore is believed to be viable, but it is unknown at this time if Glencore will be considered liable as a parent company of Columbia Falls Aluminum Company (CFAC). It is unknown at this time if CFAC is viable.

22. Anticipated response costs:

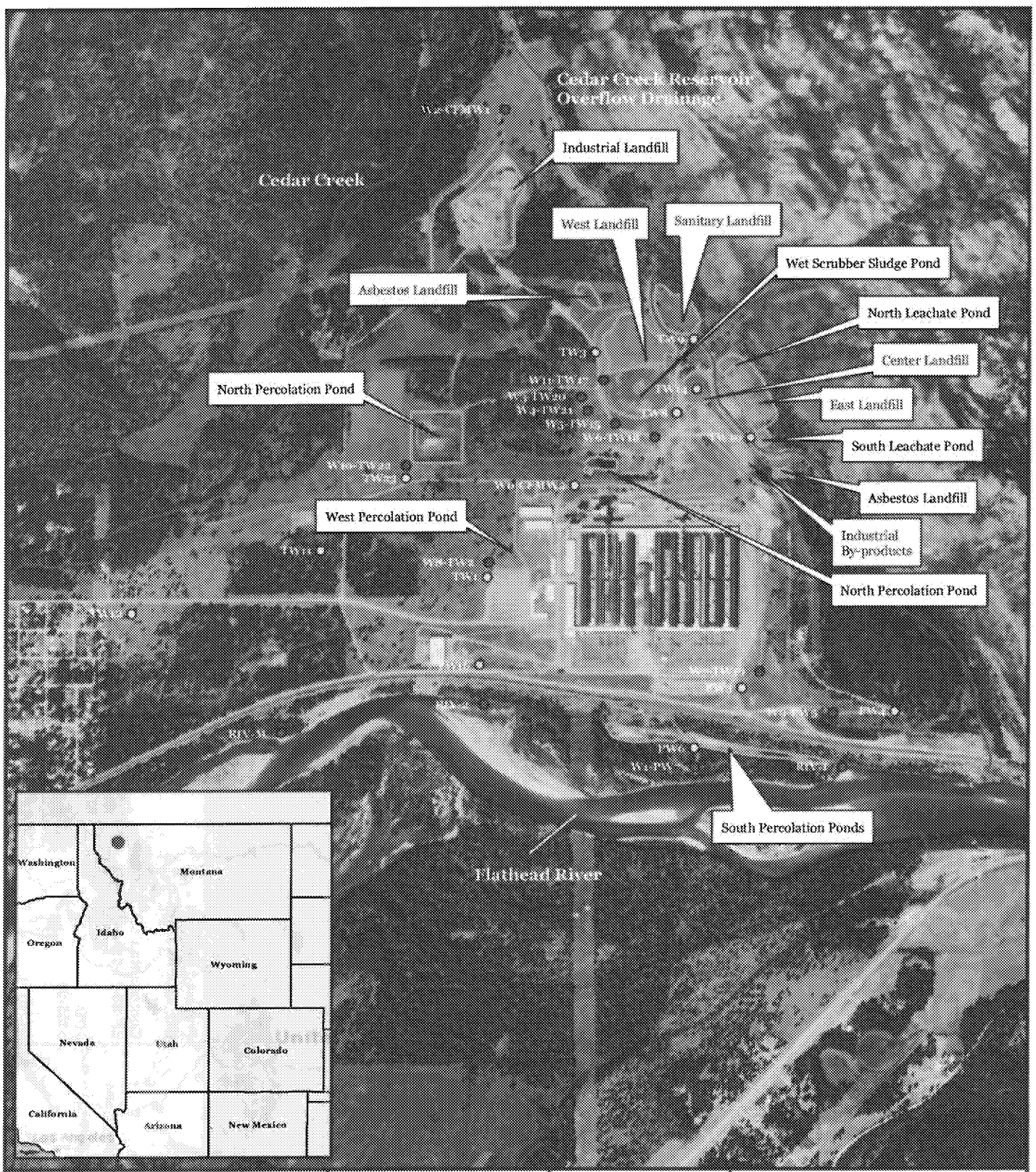
[] < $10 million
[] $10-20 million
[X] $20-50 million
[] $50-100 million
[] >$100 million

23. Please attach to this worksheet a single 8.5" x 11" site map showing main site features and location of contamination. You may attach it separately in JPG or PDF format or copy and paste map directly into this form.

24. Attach Regional Division Director signature here.

I _____ have read the Site Characterization
(Regional DD signature)

Worksheet for the Anaconda Aluminum Co Col Fls Red Plt site, and I concur with bringing this site before the NPL Listing Panel with the intent of sharing with AA/OSWER for the next round of NPL proposals.



Legend

- Groundwater Monitoring Wells
- MPDES Permit Surface Water Monitoring Locations
- MPDES Permit Groundwater Monitoring Wells
- Streams and Drainages
- Site Feature Boundary

0 0.15 0.3 0.6 Miles

N

Prepared for:
U.S. EPA Region 8

Contract No.:
EP-S8-13-01

TDD:
1305-04

DCN:
W0004.1A.00115

Prepared By:
Weston Solutions, Inc.
START IV

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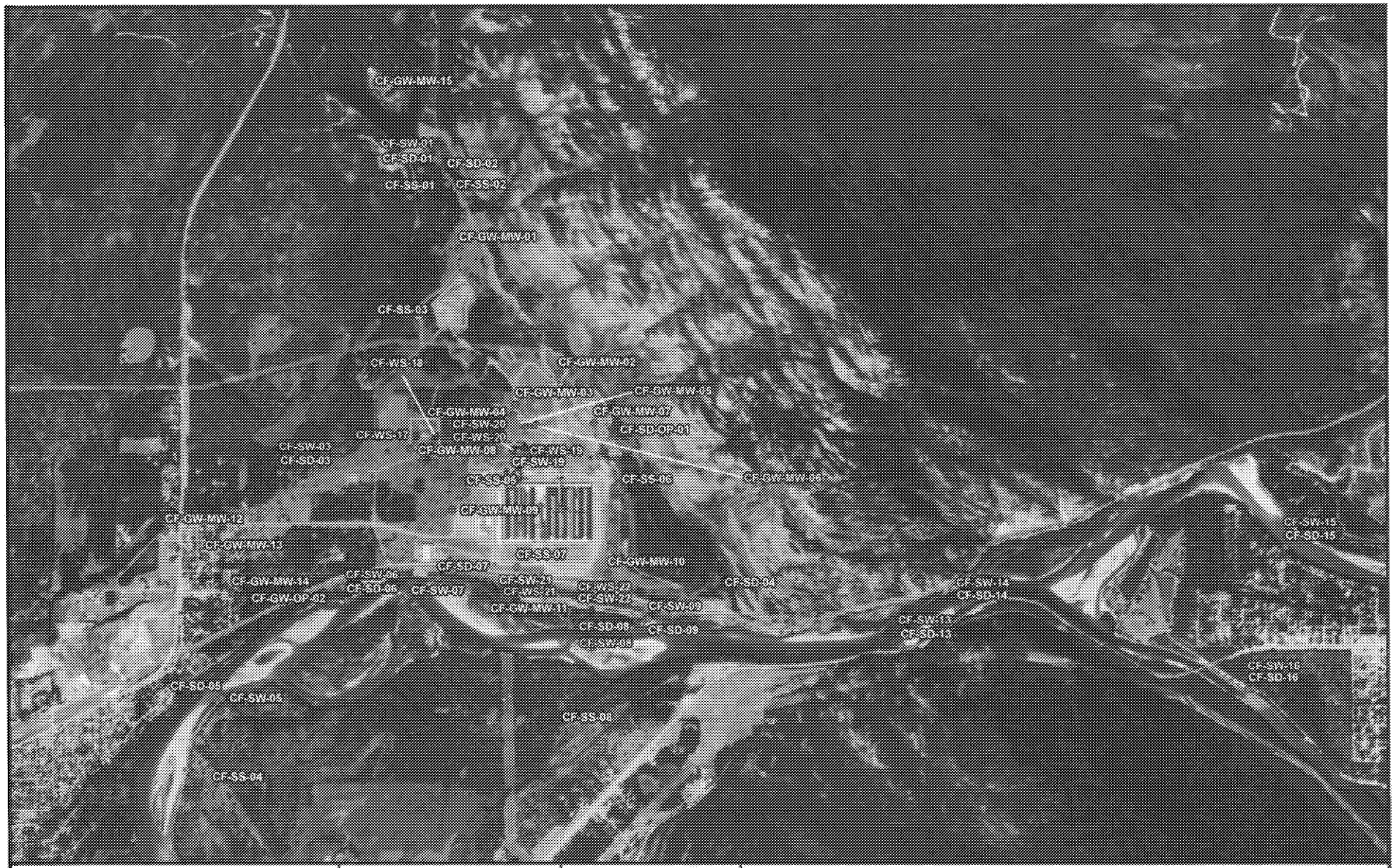
1435 Garrison Street
Lakewood, CO 80215

FIGURE 2
SITE FEATURES MAP
COLUMBIA FALLS ALUMINUM COMPANY
COLUMBIA FALLS, MONTANA

Date: 2/17/2014



Legend

- Site Feature Boundary
- Groundwater Sampling Location
- Surface Water & Sediment Sampling Location
- Surface Water & Waste Source Sampling Location
- Surface Soil Sample Locations

0 0.3 0.6 1.2 Miles

N

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FIGURE 4
SAMPLE LOCATIONS MAP
COLUMBIA FALLS ALUMINUM COMPANY
COLUMBIA FALLS, MONTANA

Date: 3/12/2014